



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,729	06/22/2006	Herbert Wagner	KIRCHNER	9941
20151 7590 08/08/2008 HENRY M FEIEREISEN, LLC HENRY M FEIEREISEN 708 THIRD AVENUE SUITE 1501 NEW YORK, NY 10017				
EXAMINER DESAL, NAISHADH N				
ART UNIT 2834		PAPER NUMBER		
MAIL DATE 08/08/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/596,729

Applicant(s)

WAGNER ET AL

Examiner

NAISHADH N. DESAI

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-10, 12-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7,10,12,13 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 6443295) in view of Clarke (US 2003/0139129)

1. Regarding claim 1, Hill teaches:

A rotary support for mounting an electric machine in a tubular structure or a bore, comprising (pre-amble, patentable weight not given):

a hollow-cylindrical body arranged in a radial direction between the electric machine and the tubular structure or the bore, for torque transmission from the electric machine to the tubular structure or the bore (Fig 1 of Hill)

an elastic connection device (Fig 1,96) held in place by the fixing elements of at least one of the groups of fixing elements on the outer circumference of the hollow-cylindrical body for establishing an elastic force-fitting connection of the hollow-cylindrical body with the tubular structure or the bore (Fig 1,96, since the elastic connection device of Fig 1,96 presses against the tubular structure, it establishes an elastic force-fitting connection between the hollow cylindrical body and the tubular structure).

Hill does not teach 'the hollow cylindrical body being formed about its outer circumference with spaced-apart groups of fixing elements in the form of outwardly projecting elevations to thereby define between the groups of fixing elements

peripheral channels or passageways, in longitudinal direction of the hollow-cylindrical body for circulation of a coolant". Clarke (Figs 2-4,145) teaches a conveyor belt assembly having "a hollow cylindrical body being formed about its outer circumference with spaced-apart groups of fixing elements in the form of outwardly projecting elevations to thereby define between the groups of fixing elements peripheral channels or passageways, in longitudinal direction of the hollow-cylindrical body for circulation of a coolant".

It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Hill to use a hollow cylindrical body having fixing elements in the form of outwardly projecting elevations about its outer circumference to allow for coolant to circulate as Clarke teaches in Figs 2-4. The motivation to do so would be that it would limit required maintenance, component replacement and facilitate timed rotation of driven members while diminishing wear and breakage (paragraphs 8 and 9 of Clarke).

2. Regarding claim 2, Hill teaches:

Fig 1, 96 shows an o-ring which is well known in the art to be detachably connected to the tubular structure of claim 1.

3. Regarding claim 3, Hill teaches:

Figure 1 shows element 96 to completely surround the circumference of the hollow cylindrical body at one or more axial areas. Also Figs 2-4 of Clarke.

4. Regarding claim 4, Clarke teaches that the elastic connection device has components which are spaced at even distances in circumferential direction and/or axial direction on an outer surface area of the hollow-cylindrical body (Figs 2-4).

5. Regarding claims 5-7:

Element 96 of Figure 1, Col 4 lines 47-67 of Hill is an illustration of an o-ring. It is well known in the art to make o-rings of elastic material like rubber or the like. Hill discloses the claimed invention except for explicitly mentioning the material used for the o-rings. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use o-rings made of an elastic material like rubber, metal or the like, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416

6. Regarding claim 10, Hill teaches:

Figure 1, 94 is an annular groove (fixing element) in which the o-ring (element 96) is received in. Col 4 lines 53-57. Also Figs 2-4 of Clarke.

7. Regarding claim 12, Hill discloses the claimed invention except for the shape of the o-ring to be conical. It would have been an obvious matter of design choice to make the o-ring in a conical shape, since such a modification would have involved a mere

change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955)

8. Regarding claim 13, Hill teaches a roll and motor with a rotary support (Fig 1). Hill does not teach cooling channels to be on the rotary support. Clarke teaches a rotary support having channels or passageways as part of a cooling circuit (Figs 2-4).

9. Regarding claim 17, Hill discloses the claimed invention except for the elastic connection device to be arranged conically. It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the elastic connection device in a conical shape in relation to the length axis of the hollow cylindrical body, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

10. Regarding claim 18, Hill teaches that elastic connection device (Fig 1,96) is constructed to realize attenuation, centering and torque transmission between the hollow-cylindrical body and the tubular structure (the elastic connection device (o-ring) centers and realizes attenuation(as it is elastic) and transmits torque between the hollow-cylindrical body and the tubular structure (as it presses against the tubular structure)).

11. Regarding claim 19, Hill teaches that the hollow-cylindrical body has fixing elements on the outer circumference of the hollow-cylindrical body (Fig 1,94), said elastic connection device (Fig 1,96) being received between neighboring fixing elements and sized to project slightly radially beyond the fixing elements (it is clear that the o-ring is projecting slightly radially beyond the fixing elements since it is pressing against the tubular structure, otherwise if it was resting inside and not protruding radially beyond the fixing elements, it would NOT be able to press against the tubular structure).

12. Regarding claim 20, Clarke (Figs 2-4) teaches that the fixing elements are constructed in the form of elevations projecting out from the outer circumference of the hollow-cylindrical body and placed in a offset relationship to allow circulation of a coolant.

Claims 8,9 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 6443295) in view of Clarke (US 2003/0139129) further in view of Page et al (US 4399598).

13. Regarding claim 8:

Figures 2 and 3 of Page et al shows the elastic connection device (element 50). Also Col 5 line 34.

Hill teaches a conveyor assembly. Hill does not teach a hollow cylindrical body having fixing elements in the form of outwardly projecting elevations on its outer circumference for circulation of a coolant. Clarke teaches a conveyor roller assembly having fixing

elements in the form of outwardly projecting elevations on its outer circumference.

Clarke does not teach the use of metal for the elastic connection device. Page et al teaches the use of a tolerance ring made of metal. It would have been obvious at the time the invention was made to modify the device of Hill and Clarke with the teachings of Page et al to make a motor (rotary support) with o-rings and tolerance rings of metal. The motivation to do so is that it would allow for the roll to compress radially, expand circumferentially (Col 5 lines 34-55 of Page et al) and this would improve the flexibility of the rotary support.

14. Regarding claim 9, Page et al (Col 5 lines 34-55) disclose the use of a tolerance ring that can be modified as a result of external pressure.

15. Regarding claims 14-16, Page et al (Col 1 lines 67-68 and Col 2 lines 1-8) disclose the use of an elastic connection device made of material such as natural or synthetic rubber.

Clarke and Hill discloses the device as in claim 1 above. Hill does not disclose the elastic connection device to have components spaced on the outer surface area of the hollow cylindrical body. Page et al teaches the use of o-rings made of rubber, tolerance rings made of metal, which can modify its shape as a result of external pressure. It would have been obvious at the time the invention was made to modify the device of Hill with the teachings of Page et al to make a motor (rotary support) with o-rings and tolerance rings of metal. The motivation to do so is that it would allow for the roll to

Art Unit: 2834

compress radially, expand circumferentially (Col 5 lines 34-55 of Page et al) and this would improve the flexibility of the rotary support.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 for details.

17. According to § 2111 of the MPEP, claims must be given their broadest reasonable interpretation. A portion of this section is cited below for the practitioner's convenience:

During patent examination, the pending claims must be "given *>their< broadest reasonable interpretation consistent with the specification." >*In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).< Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. See *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAISHADH N. DESAI whose telephone number is (571)270-3038. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Naishadh N Desai
Patent examiner

/Darren Schuberg/
Supervisory Patent Examiner, Art Unit 2834